

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A mMethod for detecting a leakage in a pipeline (4) or similar conduit characterized by:

~~the use of an umbilical flexible tube (1) laid within and along said pipeline (4),~~

~~the displacement of a solution column which has a front and a pressure (P) at the front and which is (2) within said umbilical flexible tube (1),~~

~~the measurement of the pressure (P) at the front (3) of said solution column (2),~~

and

~~the localization of said front (3) from the said measured pressure,~~

~~wherein the leakage is determined by detection of a change in pressure (P) at the front of the solution column.~~

2. (currently amended) A mMethod according to claim 1 wherein there is a temperature at the front, the method furthermore comprising the measurement of the temperature at the front (3) of said solution column (2).

3. (currently amended) A mMethod according to claim 1 wherein the solution (2) is a saline solution and wherein the measurement of the pressure (P) is obtained via ~~the~~ measurement of ~~the~~ electrical resistance or capacity.

4. (currently amended) A sSystem for detecting and localizing a leakage in a pipeline ~~(4)~~ or similar conduit using the method of claim 1, ~~characterized by the fact that it the~~ system comprising comprises:

aAn umbilical flexible tube ~~(1)~~ adapted to be laid within a pipe ~~(4)~~;

a pPumping means ~~(7)~~ adapted for moving a solution ~~(2)~~ within said umbilical flexible tube ~~(1)~~;

a pPressure measuring means ~~(C.sub.1, C.sub.6, 6, CVC)~~ adapted for determining the pressure (P) at the front of a solution ~~(2)~~ moving within said flexible tube ~~(1)~~;

a lLocalization means adapted for determining the position of a solution front ~~(3)~~ from the measured pressure (P) of said front ~~(3)~~.

5. (currently amended) A sSystem according to claim 4 further~~more~~ comprising a temperature measuring means adapted for determining the temperature at the front ~~(3)~~ of a solution ~~(2)~~ moving within said flexible tube ~~(1)~~.

6. (currently amended) A sSystem according to claim 4 further~~more~~ comprising capacitive sensors ~~(C1, C6)~~ adapted for measuring the electrical capacity of a solution ~~(2)~~ moving within said flexible tube ~~(1)~~.